Factors Influencing Behavioral Intention Regarding Prostate Cancer Screening among Older African-American Men

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Purpose: To assess factors associated with perceptions of prostate cancer screening among African-American men aged ≥55 years based upon items developed using the Preventive Health model (PHM).

Research Approach: Focus group research and thematic coding using content analysis.

Setting: A large midwestern, private, nonprofit health system.

Participants: African-American men aged ≥55 years. Focus group 1 included 10 men who ranged in age from 55–87 years, with a mean age of 73.4 years. The 11 participants in focus group 2 ranged in age from 55–81 years, with a mean age of 68.7 years.

Methodological Approach: Focus group questions were developed based on the conceptual framework of the PHM. African-American men aged ≥55 years were randomly selected from the patient population of the healthcare system to participate in one of two focus groups. Content analysis was used to code the focus group transcripts.

Main Research Variables: Self-reported perceptions of prostate cancer screening.

Findings: Major themes emerging from the focus groups related to prostate cancer screening include: lack of knowledge regarding cancer, fear of cancer, confusion between prostate cancer screening and prostate cancer diagnostic tests, encouragement by others as motivation for cancer screening, intergenerational transfer of health information, lack of health insurance coverage as a barrier to prostate cancer screening and treatment, and limited availability of screening clinic hours during nonworking hours.

Interpretation: The information gained from this study could be used to develop interventions promoting informed and shared decision-making by patients and their providers regarding prostate cancer screening.

Key words: African Americans ■ men's health ■ prostate cancer ■ preventive medicine ■ health screening

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INTRODUCTION

Prostate cancer affects African-American men in disproportionate numbers relative to their Caucasian counterparts. For example, African-American men have the highest incidence and mortality rates of prostate cancer of any other racial or ethnic group, and this disparity continues to increase. Prostate cancer rates are 30% higher among African-American men aged ≥65, compared with Caucasian men in the same age group.

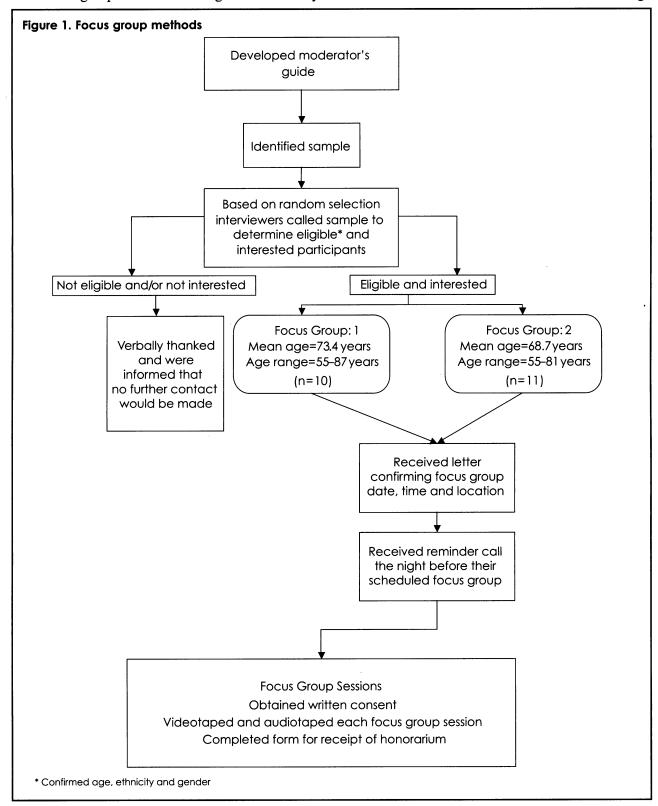
Despite differences of opinion about the need for routine prostate cancer screening in reducing prostate cancer mortality, it occurs on a widespread basis in clinical practice. Understanding factors related to perceptions of prostate cancer screening among African-American men is critical in order to develop culturally appropriate interventions designed to enhance their informed decision-making about prostate cancer screening based on knowledge of risks and probable benefits of different treatment options. 15-18

METHODS

Focus groups were chosen as a mode of data collection because they can be a rich source of information. In a focus group, data are collected from a homogeneous group of individuals using a predetermined, structured sequence of questions in a focused discussion.¹⁹ Focus groups allow for an in-depth exploration of the knowledge, attitudes and beliefs of specific cultural groups.²⁰⁻²⁴

Focus Group Sampling Frame

Institutional review board (IRB) approval was obtained to identify and select the focus group sample and to conduct the focus groups. The methods used to identify and select the study samples for focus group 1 and focus group 2 are shown in Figure 1. The Henry Ford Health System (HFHS) Corporate Data Store, an administrative database, was used to randomly select potential participants who met each of the following eligibility criteria: 1) African-American, 2) male, 3) aged ≥55 years, and 4) made at least one visit to HFHS in the first six months of 1998. This age



group was chosen because it reflects the ages at which prostate cancer is typically diagnosed. A total of 10,689 patients meeting these criteria were identified.

Focus Group Sample Selection

Random sample selection of focus group participants within the selected age range was deemed appropriate for the following reasons. First, the focus groups were designed to ascertain factors associated with perceptions of prostate cancer screening among African-American men. Second, the focus group results will be used to develop a survey that will be administered to a random sample of African-American men aged ≥55 years. Therefore, the sample selection of the focus group participants parallels the sample selection process that will be used in the survey administration. Potential focus group participants were not excluded based on prior cancer history.

For each of the two focus groups, men were randomly selected from a list of potential participants to be called by telephone and invited to participate in a focus group. A short eligibility screener to verify the age, race and gender of the potential participants was conducted during the invitational call. In addition, the \$25 honorarium was described. Recruitment continued until 15 eligible and interested men were identified for each focus group. Fifteen men were enrolled in each focus group under the assumption that some enrolled men would not actually attend the focus groups.25 The enrolled men were then mailed a written confirmation of their focus group date, time and location. Transportation to the focus groups was not provided. The men received a reminder call the night before their scheduled focus group session. Kohler et al. 19 suggest including 8–10 participants in focus groups.

Focus groups 1 and 2 took place at an HFHS research office located in the geographic center of Detroit, MI. The moderator, assistant and recorder at each focus group were African-American and <40 years of age. At the beginning of each focus group, each participant signed an IRB-approved consent form to participate in the study. Each two-hour focus group was both video- and audiotaped. In addition, written notes were taken during each focus group as a supplement to the mechanical recording devices.²⁶ As each focus group began, the purpose of the focus group was explained, and participants were encouraged to speak freely. Confidentiality ground rules were described. Each focus group began with an icebreaker, after which the focus group questions were asked. At the end of each focus group, each participant signed a receipt after being given a \$25 cash honorarium. Participants were then given copies of their signed receipts.

Conceptual Framework of the Focus Group Questions

Focus group questions were based on the Preventive Health model (PHM) (Figure 2). The PHM provides a framework for understanding perceptions of prostate cancer screening held by African-American men and their behavioral intention to receive prostate cancer screening. Surveys based on the PHM have been used in previous studies to identify predictive factors for prostate cancer screening among African-American men.^{4,27}

In the PHM,⁴ four sets of factors are posited to be related to behavioral intention and health behavior. These are: 1) background items, 2) a cognitive/psychological factor, 3) a social support and influence factor, and 4) a programmatic/systemic factor.⁴ The factors in the PHM are based on theories found in classic psychosocial models such as the Health Belief model,²⁸⁻³⁰ the Theory of Reasoned Action,³¹⁻³³ Social Cognitive Theory,³⁴ and other relevant theories such as perceived control and self-efficacy (or confidence that one's actions can produce desired outcomes).

Background factor items in the PHM include sociodemographic characteristics, such as age, race, ethnicity, gender, medical history and past preventive screening behavior.^{4,27} In the PHM, race and ethnicity are background items that can affect health behavior directly or through the mediator of preventive intentions.

The cognitive/psychological factor of the PHM includes perceptions of cancer and cancer screening, such as perceived susceptibility to disease, worry about having a disease, interest in knowing diagnostic status, belief in disease prevention and curability, belief in salience and coherence of behavior, belief in efficacy of detection and treatment, perceived self-efficacy related to behavior, and concern about behavior-related discomfort.^{4,27} For African-American men in particular, the research literature supports the applicability of cognitive/psychological factors, such as perceived embarrassment and discomfort to prostate cancer screening behavior.^{35,36}

The social support and influence factor of the PHM encompasses the support and influence of family members and healthcare professionals related to prostate cancer screening decision-making.^{4,27} Programmatic/systemic factors include characteristics of healthcare delivery systems that facilitate (or inhibit) preventive behavior.^{4,27}

Focus Group Analysis

A content analysis approach^{21-23,37-39} was used to code the focus group transcripts. The transcripts were independently coded by the investigators and were checked for accuracy against notes taken during the focus groups.²⁴ The coding process provided a sys-

tematic approach to identifying themes in the data.³⁹ Statements identified from the data were open coded and grouped into conceptual categories, themes or axial codes by consensus among the investigators.

RESULTS

Focus group 1 included 10 men ranging in age from 55–87 years, with a mean age of 73.4 years (five enrolled men did not attend). The 11 men in focus group 2 had an age range of 55–81 years, with a mean age of 68.7 years (four enrolled men did not attend). The age of the men in each focus group was fairly evenly distributed by decade.

The focus group items that were included in the present study were based on the conceptual framework of the PHM. The themes emerging from the two focus groups are discussed in relation to knowledge and to the components of the PHM. To reiterate, this model includes background factor items such as age, race, ethnicity and gender, a cognitive/psychological factor, a social support and

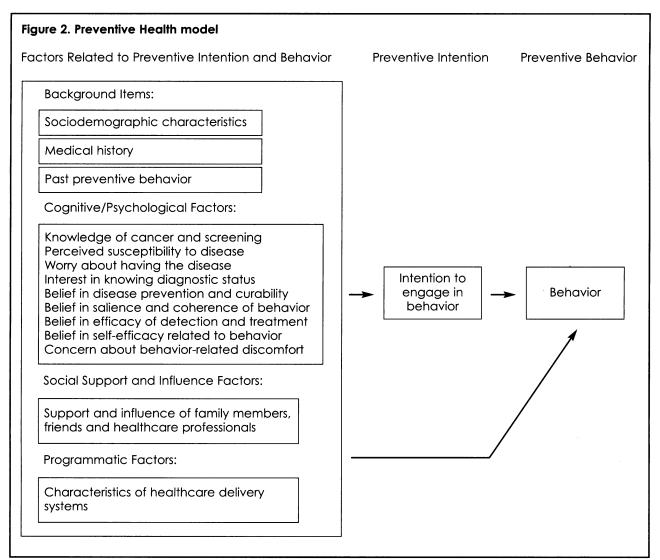
influence factor, and a programmatic/systemic factor. Results related to knowledge and to background items, the cognitive/psychological factor, social support and influence factor, and programmatic/systemic factor are presented in the following sections. Given the voluminous amount of focus group data obtained, only key findings are highlighted here.

Focus Group Results Related to Knowledge of Prostate Cancer and Prostate Cancer Screening

Some focus group participants' comments reflect a lack of knowledge of prostate-specific antigen (PSA) tests. Participants stated:

- "I don't know what it [PSA test] is."
- "The PSA is not a cancer that is in your blood."

In contrast, other participants' comments indicate knowledge of prostate cancer risk factors. In response to the question, "What do you think your



risk is of getting prostate cancer, compared to other men your age?", participants stated:

- "I think I have reduced risk because I haven't smoked in 50 years, I eat fairly good."
- "Afro-American men, there is a greater incidence of prostate cancer [in this population compared to others]."

In addition, some participants stated correctly that prostate cancer has a genetic component, in response to the question, "Do you think that prostate cancer runs in families?" Participants made the following statements:

- "I do think it [prostate cancer] runs in the family."
- "You don't have to get prostate cancer just because someone else in the family got it."
- "All my people died of cancer. I had five brothers and all of them died of cancer and my daddy and I got cancer, and I do believe that it runs in the family."
- "I would agree to that [fact that prostate cancer runs in the family]."

Knowledge related to prostate cancer screening guidelines was not assessed in the focus groups.

Focus Group Results Related to the Background Factors of Race and Gender

One background factor is the role of African-American males' beliefs regarding health and healthcare. Participants made the following comments related to this factor in response to the question, "What do you think are some of the reasons some African-American men choose not to get screened for prostate cancer?":

- "Traditionally, African-American men have not gone to doctors. You know a lot of you have worked while you are sick, and you won't go until it is too late or you end up in the hospital; by that time it is too late. Why don't you go in for a check-up twice a year? You won't do it."
- "He's [African-American men are] too macho [to see a doctor]. I had BlueCross all my life but it was 10 or 15 years before I would go and see a doctor, but I had the insurance there, but I wouldn't go. And it's a lot of other people that way, too ... You start feeling bad, that's when I started going [to see a doctor]."
- "They're too much man to go to the doctor; [it might] make them look puny."
- "You shouldn't look at it negatively; it's just a fact of life [that African-American men do not

- like going to see a doctor]."
- "I would also add that most men middle age and younger black men are short [of] patience. How many times have we all gone into the clinic and the clinic was full and mostly what you saw in the clinic were women and kids and the men were there, they were out in the car waiting because they brought them [the women and children] up there [to the clinic]. You did not see them sitting in there waiting to see the doctor."

As may be seen, the focus group members discussed the reluctance of many African-American men to see healthcare providers.

Focus Group Results Related to the Cognitive/Psychological Factors of Fear of Cancer, Embarrassment/Shame, and Belief in the Efficacy of Cancer Early Detection as Motivation for Prostate Cancer Screening

Fear of cancer and embarrassment/shame related to having prostate cancer are cognitive/psychological factors that were cited by the focus group participants. Participants made the following comments related to their stated perceptions of cancer in response to the questions, "What things come to mind when you hear the word *cancer*?" and, "How do you feel when these things come to mind?":

- "Most people I talk with seem to be afraid to talk about cancer with you or me."
- "They don't want to talk about it."
- "I used to have that fear though; I have had that fear."
- "I fear the cancer."
- "I think it is up to the ones that don't fear to inform the ones that do fear. And I think that we should get help from the professional people like yourself to help us. You people have the power to do it—we don't. We can tell you our wishes, I would be glad to share my experience anywhere."

Participants made the following comments related to embarrassment/shame associated with a prostate cancer diagnosis. These comments seem to be related to worries about having cancer.

 "But most men ... think it is a shame to have cancer and they look at you like it's got a scorn on you or something ... But don't be afraid to tell somebody that you got cancer and you went to get a treatment and the doctor said you're cured." • "Some people ... are embarrassed and afraid like they don't want to talk about it (prostate cancer), so that is part of it, too."

In terms of the cognitive/psychological factor of the perceived benefits of the efficacy of prostate cancer early detection via screening, study participants made the following comments in response to the question, "What do you think are some of the benefits of prostate cancer screening?":

- "It puts your mind at ease."
- "It gives you peace of mind, quality of life and longer life."

Other participants made statements related to the cognitive/psychological factor of belief in the efficacy of early detection as motivation for prostate cancer screening. These participants stated:

- "I have seen people who have waited too long [to get screened for prostate cancer] and really suffered."
- "In relationship to people not coming in or being afraid to come in for a particular test because of the fact that they might have cancer, ... they are well aware of the fact that the sooner they come when they have cancer, the sooner it is taken care of, the sooner they might get well."
- "I don't want to get to the symptoms; I want to know before I get the symptoms."

Focus Group Results Related to the Social Support and Influence Factor of Intergenerational Transfer of Health Information

In terms of the social support and influence factor, focus group participants noted the importance of transferring health information intergenerationally. It is important to note that these transfers were described as taking place from older to younger persons as well as from younger to older persons. Focus group members made the following statements in response to the question, "Which types of people or organizations do you think have the greatest influence over the decision of black men to get screened (or checked) for prostate cancer?":

- "... [medical personnel] got to have elder people more educated [about prostate cancer screening] and let them take care of the young ones [getting screened for prostate cancer]."
- "Because they [intergenerational families] will discuss it [cancer screening] at the dinner table."

 "If one of my daughters tells me, 'Dad, you are looking kind of peaked, you need to go in and get checked', you know, that would encourage you much more than if my mother said, 'Have you been checked lately?'"

Some of the comments made by focus group participants regarding encouragement by others to receive prostate cancer screening include the following statements in response to the question, "Do you think that using TV, radio, newspaper and magazine ads to encourage black men to get screened (or checked) for prostate cancer would be effective?":

- "We get warnings all over TV [regarding the need for prostate cancer screening] ... and pretty soon you don't pay it any attention. I think in order to get some reaction you have got to be able to relate to that person and their own frame of reference, you know in order to get their attention, not just some well-known person on TV."
- "Personally, I think it [the decision to receive prostate cancer screening] is a personal discussion and you have to talk to them one on one ..."
- "How about (raising) awareness through the churches? ... That information would be important ... [knowing whether] there is a greater possibility of you getting prostate cancer because you are black...if you had a black man [saying this]."

As indicated, the social support and influence factors cited included encouragement by church members as well as personal, face-to-face approaches to facilitate decision-making related to prostate cancer screening.

Focus Group Results Related to the Programmatic/Systemic Factors of Characteristics of Good Healthcare Providers, Need for a Computerized Prostate Cancer Screening Reminder System and the Importance of Health Insurance Coverage in Obtaining Screening

Healthcare providers were cited by focus group participants as playing a key role in the participants' decisions to get screened for prostate cancer in response to the question, "Do you think that testing for cancer should be included as part of the physical exam done by your doctor?". Some of the participants cited characteristics of a good healthcare provider as giving his or her patients awareness (knowledge), explaining procedures, and ensuring that his or her patients are screened at appropriate intervals. The participants stated that prostate cancer

screening should be included in routine care. Participants' statements include: "Can you explain why, when the person came in for a physical, that the people that gave them that physical didn't include tests for prostate cancer? Some of those things you can discover just by giving them a test."

Some participants stated a desire for the programmatic/systemic factor of computerized medical records that would remind healthcare providers of the need to screen their patients at appropriate intervals.

- "It seems like that system could be computerized, with just your name and age."
- "Like dentists do that; they find out you have good dental insurance and they make sure that you get a notice [for a return visit]."
- "You should get a notice from your doctor [regarding future prostate cancer screening visits]."

Health insurance coverage was another programmatic/systemic factor cited by study participants. In response to the question, "Would the cost of cancer treatment, if cancer is found, keep you from getting screened for prostate cancer?", participants noted the importance of having health insurance. Comments made by these participants include the following:

- "I saw something on TV about the insurance, how much they pay and how much the cost of the test is."
- "Somebody needs to take a look at thorough patient care. I don't care how much money is involved. Somebody is always talking about how the HMO will only pay this amount. They [health systems] need to stop playing with people's lives because of money."
- "I think that there are a lot of black individuals that don't come in for an exam period ... a lot of them don't have health insurance."
- "We [black people] have not had the good insurance [that facilitates cancer screening]."
- "We [black people] have a lot of homeless here in the city that are not getting any type of healthcare."
- "A whole lot of these things [health issues] we are suffering now come from our heritage ... it comes from the way society has pushed us in a corner. I don't call it equal [quality of healthcare offered to blacks]. I am afraid of that word, it is kind of what you have been forced to accept ... why don't you have the money [to pay for healthcare]? Because you were ostracized and didn't have a chance to get it."
- "And what healthcare in previous years was available to you?"
- "A lot of things [diseases] come from the lack of money [to purchase quality healthcare]."

These comments imply that lack of insurance is a barrier to screening. Another programmatic/systemic factor cited by the study participants was the need to work; four participants stated that working took precedence over taking time off work to get screened for prostate cancer. This indicates that clinic hours were not open at convenient times for working men.

DISCUSSION

The purpose of this study was to use focus group data to assess perceptions of prostate cancer and prostate cancer screening among older African-American men aged ≥55 years. The focus group questions were based on the PHM. The PHM includes background factors, cognitive/psychological factors, social support and influence factors, and programmatic/systemic factors, all of which have been described in detail previously in this paper.

As was discovered, statements made by the 21 focus group participants reflected their understanding of prostate cancer risk factors, including its genetic component. Cognitive/psychological factors of fear and embarrassment/shame related to prostate cancer diagnosis were reported by the participants. In a previous study, Shelton, Weinrich and Reynolds⁴⁰ found that embarrassment related to the screening exams was cited by African-American men as a barrier to obtaining prostate cancer screening. Other investigators have also found that embarrassment is related to prostate cancer screening.41,42 However, our findings show that it was the prostate cancer diagnosis itself that was related to embarrassment and shame. Perhaps this is because prostate cancer is viewed as a health problem related to sexual and urologic function.41,43-44

It is interesting to note that the study participants described themselves as being influenced by a wide array of sources, including children, regarding their decision to get screened for prostate cancer. Other investigators have highlighted the important role of familial social support in influencing decision-making related to prostate cancer screening among African-American men.⁴⁵ Testimonials from prostate cancer survivors were also cited as a source that would influence the decision to get screened for prostate cancer.

A programmatic/systemic factor cited was the need to prioritize working versus taking time off work to get screened for cancer due to the limited availability of clinic hours during nonworking hours. This finding leads to the implication that if cancer screening is not offered at their workplaces or at times that do not conflict with their work schedules, African-American men may make the decision to work rather than to get screened for cancer. Inconvenient clinic hours have been cited by other investi-

gators as a factor influencing the decision of African-American men to participate in prostate cancer screening. 41,42

Interpretation

Health decision-making refers to the process of choosing among specific, health-related care options. ⁴⁶ The findings of this study could be used to promote informed and shared decision-making regarding prostate cancer screening by patients and their providers. As Ford et al. ⁴⁷ point out, increasingly, patients expect to be given clear details about their health conditions and their healthcare options. Shared decision-making is an approach that includes four basic elements:

- 1. Both the patient and the doctor are involved in the decision-making,
- 2. Information is shared by both,
- 3. Both the patient and doctor take steps to build a consensus regarding the preferred mode of healthcare,
- 4. Both agree on the type of healthcare that will be conducted. 16

Thus, in a shared decision-making model, information is exchanged between patients and physicians, who discuss their preferences for specific types of healthcare. ⁴⁷⁻⁴⁹ A barrier to shared decision-making is the amount of medical information understood by patients. ^{17,49,50} Therefore, informed decision-making is an essential component of shared decision-making. In order to give patients the information they need to make informed decisions about prostate cancer screening, healthcare providers need to address patients' perceptions of screening.

During the shared health decision-making process, healthcare providers could assess patients' perceptions of prostate cancer screening based on cognitive/psychological factors, social support and influence factors, and programmatic/systemic factors by asking a few questions related to these factors. Physicians could then give patients information to address each of these factors. This information could be drawn from existing published resources developed by the Centers for Disease Control and Prevention, the American Cancer Society, the National Cancer Institute, and/or Krames Communications. At the same time, providers could share information with patients related to their personal risk based on their age, race and family history of developing prostate cancer. 6,51-57 Giving patients the information they need will allow them to become informed partners with their physicians in the shared decision-making process related to prostate cancer screening. Physicians could also involve patients'

families, including their children, in the decisionmaking process. In addition, clinic hours could be scheduled at times that are convenient for working men. More work also needs to be done to assist African-American men in obtaining health insurance to cover the costs of their prostate cancer screening, follow-up tests and treatment.

Limitations

The responses provided by the focus group participants may not be unique to African-American men. That is, a group of Caucasian or Latino men might have provided similar responses. However, data from the HFHS show that approximately 27% of patients are African-American. At the Detroit campus of HFHS, where the majority of HFHS research activities occur, about 70% of patients are African-American. These percentages roughly parallel the percentages of African Americans in southeastern Michigan and Detroit, respectively. Thus, the patient population of HFHS, from which the study participants were randomly selected, is representative of the population characteristics of southeastern Michigan. Therefore, although this study presents data from only 21 African-American men aged ≥55 years, the responses of the focus group participants are likely representative of those of other African-American men of this age group in southeastern Michigan. Investigators of future studies could conduct surveys with similar populations to ascertain whether similar results are obtained.

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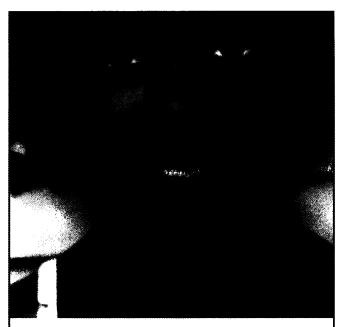


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